Abstract

The present invention relates to live attenuated bacteria of the genus *Actinobacillus pleuropneumoniae* that have a mutation in an *apxIV* gene such that no functional ApxIV toxin can be produced. The invention also relates to methods for the production of such bacteria. Also vaccines comprising such bacteria and methods for the production of such vaccines are part of the invention. The invention further relates to subunit vaccines comprising an ApxIV toxin, to methods for the production of such vaccines and to methods for the protection of animals against infection with bacteria of the genus *Actinobacillus pleuropneumoniae*. In addition, the invention relates to the promotor of the *apxIV* gene. Finally, the invention relates to diagnostic tests for the selective diagnosis of *Actinobacillus pleuropneumoniae* infections and to diagnostic tests discriminating between *Actinobacillus pleuropneumoniae* field strains and vaccine strains.